

HIV-related Characteristics of PLWH with Histoplasmosis

	Survived (n=34)	Late mortality (n=12)	P value
Median CD4 count (median, IQR)	12 (6, 46)	26 (8, 52)	0.515
Median HIV viral load at diagnosis (median, IQR)	5.5 (4.4, 6.2)	5.2 (3.8, 5.5)	0.250
Median HIV viral load at last observation (median, IQR)	2.0 (0, 4.5)	4.1 (2.6, 5.5)	0.010
New HIV diagnosis at diagnosis	18 (53%)	3 (25%)	0.095
Median time for HIV diagnosis to histoplasma diagnosis, years (median, IQR)	0.2 (0, 13.6)	3.5 (0.1, 5.3)	0.871
ART-experienced	14 (41%)	7 (58%)	0.194
Modern ART	12 (35%)	4 (33%)	0.902
HIV viral load suppressed at last observation	14 (41%)	2 (17%)	0.125
HIV viral load suppressed at diagnosis	1 (3%)	2 (17%)	0.098
History of previous OIs	17 (50%)	9 (75%)	0.133
Pneumocystis pneumonia	10 (29%)	2 (17%)	
Disseminated MAC	2 (6%)	0 (0%)	
Tuberculosis	0 (0%)	1 (8%)	
Oral Candidiasis	4 (12%)	2 (17%)	
Cryptosporidium	0 (0%)	1 (8%)	
CMV	2 (6%)	2 (17%)	
Kaposi Sarcoma	1 (3%)	0 (0%)	
Toxoplasmosis	1 (3%)	1 (8%)	
Private insurance	13 (38%)	1 (8%)	0.053
History of substance abuse	13 (38%)	2 (17%)	0.171
History of psychiatric illness	4 (12%)	0 (0%)	0.214

Conclusion. Histoplasmosis continues to be associated with high mortality among PLWH. Improved long-term survival is seen in patients with suppressed HIV viral loads.

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925. Adverse Events Due to Inappropriate Prescribing in Older Adults Living with HIV

Mark Cinquegrani, PharmD¹; M. Gabriela Cabanilla, PharmD, PhC²; Keenan L. Ryan, PharmD, PhC²; Catia Marzolini, PharmD, PhD³; Bernadette Jakeman, PharmD⁴; ¹University of New Mexico Hospital, Albuquerque, New Mexico; ²University of New Mexico Hospitals, Albuquerque, New Mexico; ³Division of Infectious Diseases and Hospital Epidemiology, Basel, Basel-Stadt, Switzerland; ⁴University of New Mexico, Albuquerque, New Mexico

Session: P-44. HIV: Complications and Special Populations

Background. People living with HIV (PLWH) are aging and experience age-related comorbidities as well as physiological changes leading to a higher risk for polypharmacy, drug-drug interactions, inappropriate prescribing and related adverse events (AE). Prior studies have highlighted a growing concern for inappropriate prescribing in older PLWH. The objective of this study was to examine the prevalence of AEs resulting from inappropriate prescribing in PLWH > 65 years of age.

Methods. This was a retrospective chart review. PLWH followed-up at the outpatient HIV clinic at the University Hospital in New Mexico between 01/01/2015 and 08/21/ 2018 were eligible if they were > 65 years of age and had >1 potentially inappropriate prescriptions (PIP). PIP were identified using the Beers and STOPP/START criteria for inappropriate medications in elderly, as well as drugs incorrectly dosed, and potentially deleterious drug-drug interactions (DDI). The University of Liverpool's HIV interaction checker and Lexicomp's interaction checker were used to screen for DDI between HIV and non-HIV drugs, and between non-HIV drugs. AEs related to PIPs were collected and their severity was classified using the WHO scale for grading of AEs.

Results. A total of 104 PLWH >65 years of age fulfilled the eligibility criteria. Most patients were male (88.5%) with an average age of 69 years. The majority of patients were virologically suppressed (89%), with an average CD4 cell count of 650 cells/ μ L. Polypharmacy (>5 non-HIV medications) was identified in all 104 patients; average number of non-HIV medications was 9.4 + 4.8. 30 (28.8%) patients experienced >1 AE, with a total of 53 AEs identified. Of those, 20 (67%) presented with a serious AE. 14 patients (47%) had to seek treatment at an emergency department and 2 patients (7%) had to be hospitalized. The most common AEs included falls (27/53 events; 51%), bleeds (7/53 events; 13%), fractures (4/53 events; 8%). Risk for an AE was significantly associated with increasing number of medications (OR 1.16; 95% CI 1.05-1.29).

Conclusion. PIP and related AEs are common in older PLWH. Interventions to prevent harm including medication reconciliation, medication review, and medication prioritization according to the risks/benefits of individual patients are warranted.

Disclosures. Keenan L. Ryan, PharmD, PhC, Theravance (Advisor or Review Panel member)

926. Antibody Response to HPV Vaccination in Pediatric and Adolescent People Living with HIV (PLWH)

Roukaya Al Hammoud, n/a¹; Elizabeth R. Unger, PhD, MD²; Gitika Panicker, PhD³; Gabriela P. Del Bianco, MD⁴; Gloria Heresi, MD⁴; Cynthia Bell, MSc⁵; James Murphy, PhD⁴; Norma Perez, DO⁶; ¹The University of Texas Health Science Center, McGovern Medical Center, Houston, Texas; ²Centers for Disease Control and Prevention, Atlanta, GA; ³The Centers for Disease Control and Prevention, Atlanta, Georgia; ⁴The University of Texas Health Science Center at Houston, Houston, TX; ⁵The University of Texas Health Science Center, McGovern Medical School, Houston, Texas; ⁶The University of Texas Health Science Center, Houston, Texas

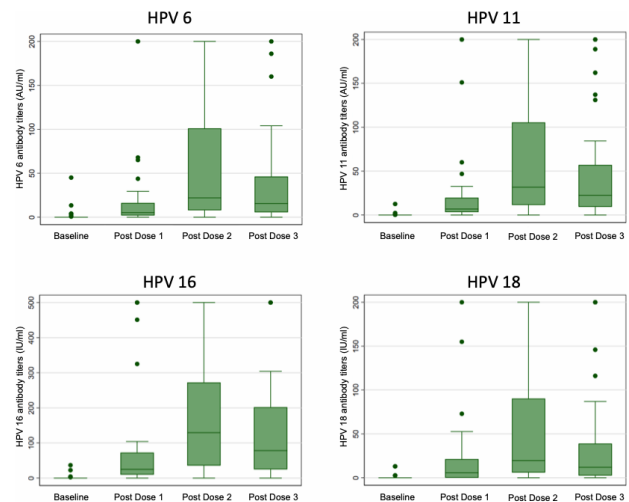
Session: P-44. HIV: Complications and Special Populations

Background. Immune dysfunction related to HIV infection is associated with an inability to clear HPV infection and may compromise the immunogenicity of quadrivalent HPV vaccine Gardasil[®] (4v HPV).

Methods. Between 2005 and 2017, males and females 7 to 20 years old age, were offered 3-dose 4v HPV vaccine. Plasma IgG titers to HPV 6 (H6), 11 (H11), 16 (H16) and 18 (H18) were measured using multiplex VLP-based ELISA. For the 36 patients, median interval from 1st dose to 2nd and 3rd doses were 73 and 216 days. Plasma sample 1 was collected at median of 91 days after dose 1, sample 2, 169 and sample 3, 740 after respective vaccine doses. A 4th sample was available for 26 patients, median 2327 days after dose 1. Rank-sum test, X² or Fisher's Exact Test were employed.

Results. Before vaccination, 10 (28%) were seropositive to 1 or more HPV types. The baseline seropositives were older than seronegatives (16 years vs 11; p=0.007). After dose 3 all participants had an Ab response to at least 1 HPV type and 32 (89%) were seropositive for 4 HPV types. Seroconversions were H18, 87%; H16 97%; H11, 100%; H6, 97%. Seroconversions after 1 dose of 4v HPV among the baseline seronegatives were 61%, 90%, 86% and 86%, respectively and 22 became seropositive for all 4 types. The 4 baseline seronegative PLWH with partial seroconversion had higher median HIV viral load (VL) compared to baseline seronegative group with full seroconversion (12,920 vs 101 copies/ml; p = 0.052), but had comparable CD4 counts. The rate of post vaccination seropositivity and baseline to peak titer response for each HPV type was not significantly different for baseline sero-groups. Among baseline seronegative, all 19 sampled distant from vaccination remained seropositive to at least 1 HPV type (84% to 3 or more types) and 6 (32%) became seronegative (sero-reversion). Those showing sero-reversion had higher VL compared to the 14 who remained seropositive (9100 vs 48; p=0.015). Time from last dose of 4v HPV to sample 4, CD4%, age, gender, and race/ethnicity were similar between the groups.

Bar Graphs representing Ab response to the 4 HPV types following each dose of 4v HPV vaccine



Conclusion. In the complex environment of a pediatric HIV specialty clinic, most PLWH mounted Ab responses to 4v HPV that were durable. H18 was least immunogenic. Patients with higher HIV VL were less likely to seroconvert for all types and were more likely to sero-revert.

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927. Antiretroviral Laboratory Monitoring and Implications for HIV Clinical Care in the Era of COVID-19 and Beyond

Lori E. Fantry, MD, MPH¹; Lawrence York, PharmD¹; Julia Fisher, PhD²; Jessica August, MD³; Jose Marquez, MD¹; Kristen Ellis, PharmD⁴; Lakshmi Malladi, BS¹; Ashwini Kaveti, BS¹; Marine Khachatryan, MS¹; Marissa Paz, BS¹; Matthew Adams, DO¹; Edward Bedrick, PhD⁴; ¹University of Arizona, Tucson, Arizona; ²University of Arizona Health Science, Tucson, Arizona; ³Santa Rosa Kaiser Hospital, Santa Rosa, California; ⁴University of Arizona Health Science Center, Tucson, Arizona

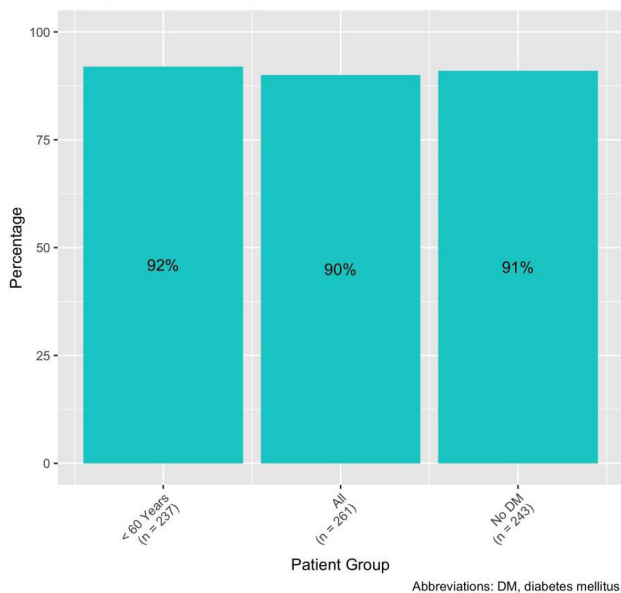
Session: P-44. HIV: Complications and Special Populations

Background. In the era of COVID-19, providers are delaying laboratory testing in people with HIV (PWH) to avoid unnecessary exposures despite antiretroviral guidelines recommending periodic testing. The purpose of this study was to examine the clinical significance of periodic renal, liver, and lipid testing.

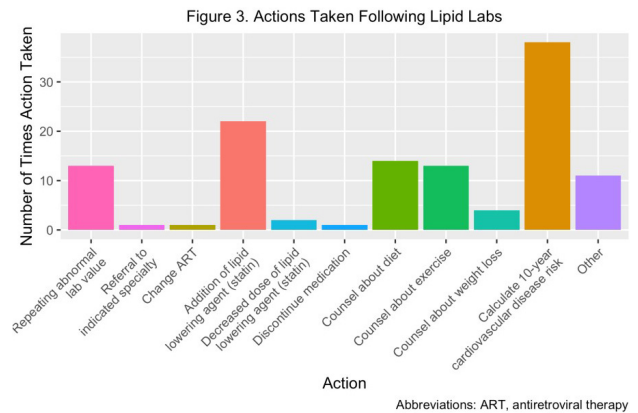
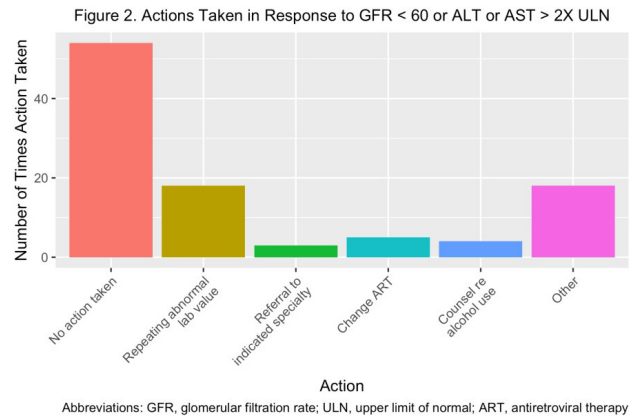
Table 1. Characteristics of Participants at the Initial Visit (N=261)

Characteristic	% (n)
Age in years, median (range)	39 (18-75)
Biological male sex	85 (223)
Race	
Asian	2 (95)
Black	18 (46)
Native American	2 (4)
White	69 (179)
Other	10 (27)
Sexual Orientation	
Heterosexual	27 (71)
MSM/bisexual men	67 (177)
Unknown	5 (13)
Illegal Drug use other than marijuana	15 (38)
CD4 cell count cells/mL	
< 200 cells/mL	12 (32)
201-500 cells/mL	35 (92)
> 500 cells/mL	52 (135)
Unknown	1 (2)

Figure 1. Percentage of Individuals with GFR ≥ 60 ml/min



Methods. We reviewed the charts of 265 people with HIV (PWH) who initiated outpatient care at HIV clinic between 1/1/16 and 12/21/18 and had at least two clinic visits. Analysis included frequency distributions, descriptive statistics, one-sided binomial exact tests, and Poisson models with 95% confidence intervals (CI).



Results. Eighty-five percent (221) of PWH had no laboratory abnormalities while on antiretroviral therapy (ART). The most common abnormality was a glomerular filtration rate (GFR) < 60 ml/min found in 10% of PWH. Multivariate analysis revealed that diabetes mellitus (DM) was associated with an increased risk of GFR < 60 ml/min (estimated rate ratio 2.68, 95% CI 1.35-5.33) and age < 60 years (estimated rate ratio .122, 95% CI .05-.32) was associated with a decreased risk (estimated rate ratio .24, CI .14 -.43). When a GFR < 60 ml/min or an AST or ALT was >2X upper limit of normal (ULN), no action was taken in 52% of the cases. When an action was taken, the most common action was to repeat testing (18%). After a lipid panel result, the most common actions were to calculate a 10-year cardiovascular risk score (32%) and add a statin (18%). Taking action after lipid panel results was strongly associated with age ≥ 40 (estimated rate ratio 9.1, 95% CI 3.3-25). ART was changed in seven PWH based on GFR, AST/ALT, or lipid panel results. There were four individuals with poor outcomes including cerebrovascular accident, acute renal failure, end stage renal disease, congestive heart failure, myocardial infarction, and death. Contributing factors were hypertension, DM, and hypercholesterolemia.

Conclusion. Individuals < 40 years without comorbidities had a low risk of having clinically significant renal and liver function abnormalities and rarely had actions taken after renal, liver, or lipid results. In the era of COVID-19 and beyond, it may be prudent for in certain groups to delay or eliminate liver, renal, and lipid testing to eliminate exposure, reduce cost, and avoid patient anxiety.

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928. Barriers to Hepatitis C Elimination in an Urban Clinic Offering Integrated HIV/HCV Treatment

Lauren A. Correia, BS¹; Christopher C. Tseng, BS¹; Mario Portilla, RN¹; Shobha Swaminathan, MD¹; ¹Rutgers New Jersey Medical School, Cranford, New Jersey

Session: P-44. HIV: Complications and Special Populations

Background. Treatment of Hepatitis C virus (HCV) infection for persons with Human Immunodeficiency Virus (HIV) is dependent on consistent outpatient follow-up. We sought to identify factors that are associated with lower HCV treatment rates in HIV/HCV co-infected patients followed at Rutgers Infectious Diseases Practice (IDP), an integrated urban clinic.